and La Chaux-de-Fonds (population of 55'000 people). The anonymous questionnaire, presenting the 10 EULAR and 25 OARSI recommendations for the treatment of hip and knee OA, asked for some demographic data of the physicians and for the knowledge and acceptance of the presented recommendations.
Results: They were expressed as a "strength of acceptance" (SoA), based on a semi-quantitative evaluation (1 to 5/5) and expressed in percent for comparison to the "strength of recommendation" (SoR) reported by EULAR and OARSI.Twenty-three questionnaires (41%) were returned. Seven of the ten GP, one of the six IM, one of the four ORTHO who responded and the three RHEUMATO knew and applied some of the EULAR recommendations. Only one GP, one ORTHO and one RHEUMATO knew the OARSI recommendations. The SoA was a little less for the primary care physicians (GP + IM) than for the specialists in the musculoskeletal diseases (ORTHO + RHEUMATO) for the EULAR (85 versus 89%) and for the OARSI (73 versus 78%) recommendations. None of the EULAR or OARSI recommendations gained a full SoA by the primary care physicians although two EULAR and one OARSI recommendations obtained a complete SoA by the specialists in the musculoskeletal diseases.
Conclusions: In this sample of physicians, most IM and ORTHO ignored the EULAR and OARSI recommendations for the treatment of hip or knee OA. Nonetheless, a majority of primary care physicians and specialists in the musculoskeletal diseases adhered to the most of them with occasionally a greater SoA than the proposed SoR. An effort for a better diffusion of these recommendations is justified among IM and ORTHO.

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OFLOXACIN LOADED, IN - SITU - GELLING, CALCIUM ALGINATE HYDROGEL IN THE LOCAL TREATMENT OF BONE AND SOFT TISSUE INFECTIONS IN ORTHOPAEDIC SURGERY

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Purpose: Infection comprises a potentially serious complication following joint replacement surgery as a result of osteoarthtritis, and also poses an even greater challenge to the health care in view of the number of severe bone, joint and soft tissue suppurations accompanying high-energy injuries.
The treatment of these infections is based on appropriately radical surgical debridement and long - lasting specified parenteral antibiotic therapy. The material most commonly used for local antibiotic therapy is a bone cement, compounded from a liquid monomer and a mixture of solid methyl and methacrylate PMMA components. As polymerization proceeds in the patient as an endothermic reaction at a temperature sometimes exceeding 100°C, the added antibiotics should be heat-resistant and must not influence the mechanical characteristics of the PMMA.
The aim of our research work was to develop an injectable drug - delivery system that forms an elastic gel within a short time after its injection into joints, bone cavities or subcutaneous tissues, prevented from flowing out by virtue of its high viscosity, while the drug release is controlled by the biodegradable polymer network.
Methods: Sodium alginate was chosen as a natural polymer which has been widely investigated for drug delivery. It also has the potential for use as a scaffolding material for tissue engineering because of its structural similarity to the natural extracellular matrix, its gentle gelling kinetics, and its low toxicity when purified.
Ofloxacin, selected as active agent at a concentration of 3%, is a synthetic broad-spectrum antimicrobial agent for oral and intravenous administration, with an in vitro activity against a broad spectrum of Gram-positive and Gram-negative aerobic and anaerobic bacteria. Crosslinking of the viscous - flowing sodium alginate mucilage was carried out ex tempore with calcium-sulphate in the presence of ethylenediaminetetraacetate (EDTA), using two injection syringes joined by a thin tube. Rheological measurements to find the suitable hydrogel delivery systems were carried out with a Paar Physica MCR 101 rheometer. An in vitro Franz vertical cell diffusion drug release test and in vitro microbiological evaluation of the drug release via the Kirby-Bauer disk diffusion method were performed.
Results: As a result of crosslinking, a marked increase in viscosity was observed, which proved suitable for our application purposes. Release from the more viscous hydrogel containing 3% sodium alginate was more delayed than that from the 2% sodium alginate - containing gel. However, considering the effect of water content on the diameter of inhibition zones it can be concluded, that the higher viscosity led to the formation of

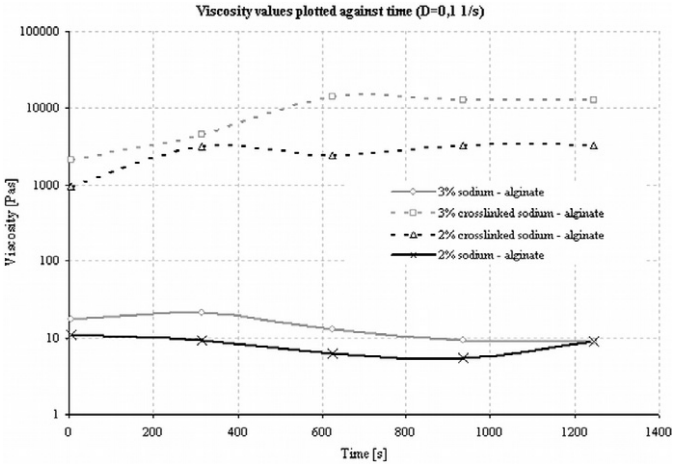

Figure 1

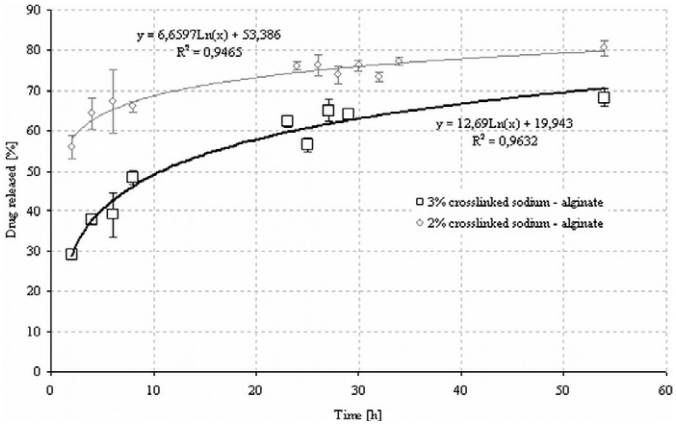

Figure 2

wider inhibition zones. Microbiological evaluation of the antibiotic release disclosed that antibiotic was released from the discs in all cases.
Conclusions: Ofloxacin released effectively from the crosslinked calcium alginate, and increased the inhibitory zones around the hydrogel discs. It seemed to be effective against most pathogens with a resistance to other antibiotics, emerging in our orthopaedic clinical practice in recent years. The present results suggest that such crosslinked calcium alginate hydrogels are good candidates for replacement of the currently used non-biodegradable bone cements with high polymerization temperature in certain orthopedic surgical interventions.

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ANTI-INFLAMMATORY ACTIVITY AND ABSORPTION OF A NATURAL ROOSTER COMB EXTRACT (HYAL-JOINT®)

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Purpose: To evaluate the potential anti-inflammatory activity *in vitro*, as well as the absorption of a natural extract from rooster comb (Hyal-Joint®).
Methods: Two *in vitro* assays were performed to determine the potential activity of Hyal-Joint®. The effect on inflammation was determined by using human dermal fibroblasts stimulated with IL-1β and co-treated with 3 concentrations of the nutraceutical extract (5, 50 and 500 μg/ml). Levels of Prostaglandin E_2 (PGE_2) and Metalloprotease-1 (MMP-1) were determined by EIA. The compound NS 398 at 1 μM was used as a positive control of cyclooxygenase-2 (Cox-2) inhibition in this assay.
The absorption of the extract was determined using the everted gut sac model in rats. Male OFA-strain rats weighing around 200g were sacrificed by cervical dislocation and segments of 4cm of jejunum, duodenum and ileum were removed, rinsed with Krebs-Henseleit solution and everted.